# Code of Practice for **Project Management**

for Construction and Development

Third edition





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### Foreword

Much has changed since the first publication of the CIOB *Code of Practice for Project Management* in 1991; nothing more so than the demands placed on the participants in the construction process.

My view of this third edition is that it is an excellent authoritative reference to the principles and practice of project management in construction and development. It will be of value to clients, project managers and all participants in the construction process as well as to educational establishments of all types. In addition, much of the information contained in the code will also be relevant to project managers operating in other commercial spheres.

Effective project management involves the assessment and management of risk. This is a strong theme that runs throughout the code, from inception to completion. Each stage in the project process, which is, as would be expected, strong in its construction theme, is described within the code which contains a broad body of knowledge brought about through the experience of the contributors. The detail contained here will be helpful throughout all the stages of a project, but particularly at inception where client involvement and pre-planning are emphasised and again at the latter stages where facilities management and occupation by the client are considered.

I strongly commend this valuable multi-institutional code of practice to all those involved in construction project management and development in the hope that a greater degree of uniformity and clarity may be achieved in this highly fragmented industry.

Sir Stuart Lipton Chief Executive Stanhope plc

### Preface

The aim of this *Code of Practice* is to provide the clients and all the other members of the project team with a definitive strategy for the management and co-ordination of any project. The objective of the code is to define the responsibilities of all the participants involved in order to achieve the completion of the project on time, to the specifications defined by the project brief and within the budget. The client expects that effective project management will enable the project's completion, by the time when it is wanted, of a standard and quality that is required, and at a price that is competitive.

The third edition of this *Code of Practice* is a client-orientated document. The role and responsibilities are clearly defined in this revised code – whether the client is an individual, a corporate body or a development company and whatever the form of contract they choose to use. The code helps a project manager define and recommend the appropriate form of contract to meet the client's requirements and ensure that the roles and responsibilities are defined and linked to the form of contract recommended.

The code represents a cross-boundary approach to construction project management by incorporating working practices and policies from across the construction industry, encompassing the entire range of clients, architects, engineers, quantity surveyors, builders, specialist contractors and the major professional institutions.

This third edition reflects the changes in the construction practices initiated through the Latham, Egan and other reports and represents a cohesive initiative to formulate guidelines and working practices covering the development of a construction project from inception through all its stages to completion and occupation of the developed facility.

The principles of project management are the same for any size of project. Therefore, the code is equally applicable to the greater number of smaller valued projects. The code recognises that each project is unique and that the means by which it may be procured will be subject to variation.

The structure of the code mirrors generally the project management process itself. The key issues considered are under the headings of inception, feasibility, strategy, pre-construction, construction, engineering services commissioning, completion, handover and occupation, and post-completion review/project close-out. Each chapter deals with a specific stage of project management and is supported by specimen forms, checklists and examples of typical documentation. It is pertinent to point out that the specimen forms, charts and checklists cannot be regarded as appropriate for universal application: they are only examples and their value must be assessed for the project in question.

Most importantly, there was a general consensus among the steering group that the *Code of Practice for Project Management for Construction and Development* is the only authoritative code for project management and no company or individual involved in construction project management should risk being without it.

### Introduction

#### **Project management**

Project management is the professional discipline which separates the management function of a project from the design and execution functions. Management and design may still be combined on smaller projects and be performed by the leader of the design team. For larger or more complex projects the need for separate management has resulted in the evolution of project management.

Project management has a long history, but in its modern form its use for construction only extends back for as little as 30–40 years. Much of the earlier codification of the principles and practices of project management was developed in the United States, although the Chartered Institute of Building published its seminal work on the subject in 1979.

Project management may be defined as 'the overall planning, co-ordination and control of a project from inception to completion aimed at meeting a client's requirements in order to produce a functionally and financially viable project that will be completed on time within authorised cost and to the required quality standards.'

This Code of Practice is the authoritative guide and reference to the principles and practice of project management in construction and development. It will be of value to clients, project management practices and educational establishments/students and to the construction industry in general. Much of the information contained in the code will also be relevant to project management operating in other commercial spheres.

#### Role

Project management has a strong tradition in the construction industry and is widely used on projects of all sizes and complexity. Even so, many projects do not meet their required performance standards or are delivered late/over budget. These issues can be directly addressed by raising the standards of project management within the construction industry and more specifically improving the skills of project managers.

There has been a recent groundswell within the construction industry for improvement in all areas of its activities. Many of these improvements are highlighted in the 1998 Egan Report and in the ongoing work of cross-industry representative bodies such as the Construction Industry Council (CIC), Construction Industry Research and Information Association (CIRIA), Construction Best Practice Programme (CBPP) and Strategic Forum for Construction (SFC). Project management is a process which runs throughout the construction life cycle and so touches all associated activities.

#### Purpose of construction project management

The purpose of project management in the construction industry is to add significant and specific value to the process of delivering construction projects. This is achieved by the systematic application of a set of generic project-orientated management principles throughout the life of a project. Some of these techniques have been tailored to the sector requirements unique to the construction industry.

The function of project management is applicable to all projects. However, on smaller or less complex projects the role may well be combined with another discipline, e.g. leader of the design team. The value added to the project by project management is unique: no other process or method can add similar value, either qualitatively or quantitatively.

#### Structure of project management

Construction and development projects involve the co-ordinated actions of many different professionals and specialists to achieve defined objectives. The task of project management is to bring the professionals and specialists into the project team at the right time to enable them to make their best possible contribution, efficiently.

The professionals and specialists bring knowledge and experience that contribute to decisions, which are embodied in the project information. The different bodies of knowledge and experience all have the potential to make important contributions to decisions at every stage of projects. In construction and development projects there are far too many professionals and specialists involved for it to be practical to bring them all together at every stage. This creates a dilemma because ignoring key bodies of knowledge and experience at any stage may lead to major problems and additional costs for everyone.

The practical way to resolve this dilemma is to structure carefully the way the professionals and specialists bring their knowledge and experience into the project team. The most effective general structure is formed by the eight project stages used in this code's description of project management. In many projects there is a body of knowledge and experience in the client organisation. This also has to be tapped at the right time and blended with the professional and specialists' expertise.

Each stage in the project process is dominated by the broad body of knowledge and experience that is reflected in the stage name. As described above, essential features of that knowledge and experience need to be taken into account in earlier stages if the best overall outcome is to be achieved. The way the professionals and specialists who own that knowledge and experience are brought into the project team at these earlier stages is one issue that needs to be decided during the Strategy Stage.

The results of each stage influence later stages and it may be necessary to involve the professionals and specialists who undertook earlier stages to explain or review their decisions. Again the way they are employed should be decided in principle during the Strategy Stage.

Each stage relates to specific key decisions. Consequently, many Project Teams hold a key decision meeting at the end of each stage to confirm that the necessary actions and decisions have been taken and the project can therefore begin the next stage. There is a virtue in producing a consolidated document at the end of each page that is approved by the Client Body before proceeding to the next stage. This acts as a reference or peg in the sand as well as acting as a vehicle for widespread ownership.

Projects begin with the Inception Stage that results from business decisions by the client which suggest a new construction or development project may be required. Essentially, the Inception Stage consists of commissioning a project manager to undertake the next stage, which is to test the feasibility of the project. The Feasibility Stage is a crucial stage in which all kinds of professionals and specialists may be required to bring many kinds of knowledge and experience into a broad-ranging evaluation of feasibility. It establishes the broad objectives for the project and so exerts an influence throughout subsequent stages.

The next stage is the Strategy Stage which begins when the project manager is commissioned to lead the project team to undertake the project. This stage requires the project's objectives, an overall strategy and the selection of key team members to be considered in a highly interactive manner. It draws on many different bodies of knowledge and experience and is crucial in determining the success of the project. In addition to selecting an overall strategy and key team members to achieve the project's objectives, it determines the overall procurement approach and sets up the control systems that guide the project through to the final Post-completion Review and Project Close-out Report Stage. In particular, the Strategy Stage establishes the objectives for the control systems. These deal with much more than quality, time and cost. They provide agreed means of controlling value from the client's point of view, monitoring financial matters that influence the project's success, managing risk, making decisions, holding meetings, maintaining the project's information systems, and all the other control systems necessary for the project to be undertaken efficiently.

At the completion of the Strategy Stage, everything is in place for the Preconstruction Stage. This is when the design decisions are made. This stage includes statutory approvals and consents, and bringing manufacturers, contractors and their supply chains into the project team. Like the earlier stages, the Pre-construction Stage often requires many different professionals and specialists working in creative and highly interactive ways. It is therefore important that this stage is carefully managed using the control systems established during the Strategy Stage to provide everyone involved with relevant, timely and accurate feedback about their decisions. Completion of this stage provides all the information needed for construction to begin.

The Construction Stage is when the actual building or other facility that the client needs is produced. In modern practice this is a rapid and efficient assembly process delivering high-quality facilities. It makes considerable demands on the control systems, especially those concerned with time and quality. The complex nature of modern buildings and other facilities and their unique interaction with a specific site means that problems will arise and have to be resolved rapidly. Information systems are tested to the full, design changes have to be managed, construction and fitting out teams have to be brought into the team and empowered to work efficiently. Costs have to be controlled and disputes resolved without compromising the value and quality delivered to the client.

The Construction Stage leads seamlessly into a key stage in modern construction and development projects, the Engineering Services Commissioning Stage. The complexity and sophistication of modern engineering services make it essential that time is set aside to test and fine tune each system. Therefore these activities form a distinct and separate stage which should be finished before beginning the Completion, Handover and Occupation Stage which is when the client takes over the completed building or other facility. The client's occupational commissioning needs to be managed as carefully as all the other stages because it can have a decisive influence on the project's overall success. New users always have much to learn about what a new building or other facility provides. They need training and help in making best use of their new building or other facility. It is good practice for their interests and concerns to be considered during the earlier stages and preparation for their move into the new facility begun early so there are no surprises when the client's organisation moves in.

The final stage is the Post-completion Review and Project Close-out Report Stage. This provides the opportunity for the project team to consider how well the project's objectives have been met and what lessons should be taken from the project. A formal report describing these matters provides a potentially important contribution to knowledge. For clients who have regular programmes of projects and for project teams that stay together over several projects, such reports provide directly relevant feedback. Even where this is not the case, everyone involved in a project team, including the client, is likely to learn from looking back at their joint performance in a careful objective review.

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